



NTSB National Transportation Safety Board

*Office of Railroad, Pipeline &
Hazardous Materials Investigations*

Right-of-Way Procedures & Safety Rules Compliance

- Right-of-way procedures
- Safety rules compliance
- Technology for wayside worker protection

Right-of-Way Procedures

- Metrorail Safety Rules and Procedures Handbook
 - OCC controllers
 - Train operators
 - Wayside workers

Radio Announcements

- OCC makes blanket radio announcement to train operators.

Radio Announcements

- Dupont Circle accident: Single radio announcement was transmitted 1 hour before the accident.

Radio Announcements

- Eisenhower Avenue accident: Single radio announcement was transmitted 2 hours before the accident.

Radio Announcements

- Train operators using affected lines were not required to acknowledge the radio notifications.

Radio Announcements

- Rules placed responsibility on workers to request OCC to keep train operators apprised of their presence.

Train Speed

- Trains were not required to be operated at reduced speeds through work areas.
- No requirement for trains to be operated in manual mode which would have given train operators more control.

Job Briefings

- Rules and procedures required the person in charge of a work crew to have an understanding with all crew members as to where each person would go to clear the track for vehicle movement.

Job Briefings

- No discussion regarding where to clear for trains was held prior to beginning work.

Job Briefings

- There was no requirement to conduct a job briefing every time the nature of the work changed or when the number of wayside workers changed.

Actions Taken After Dupont Circle Accident

- WMATA issued Special Order 06-05
 - Provides for reduced train speeds for stationary workers.

Actions Taken After Eisenhower Avenue Accident

- WMATA issued Special Order 07-01
- WMATA issued Special Order 07-02
- WMATA issued Special Order 07-06

Special Order 07-06

- Trains are required to approach work areas at 35 mph, and must reduce speed to 10 mph when wayside personnel are sighted.

Special Order 07-06

- OCC must notify train operators of stationary crew locations at least every 20 minutes.

Special Order 07-06

- Wayside workers must contact OCC after clearing each station/interlocking.
- OCC radios new location of wayside personnel to inform train operators.

Special Order 07-06

- OCC is prohibited from moving trains in a reverse route that would cause a train to approach wayside workers from behind.

Memos After Accidents

- Track walkers continue to work in pairs with one conducting track inspection and one assigned as train lookout.
- Walking track inspections to be performed during non-rush hours.
- Rail employees retrained on proper hand signals.

- WMATA made revisions in direct response to the specific circumstances of the Dupont Circle and Eisenhower Avenue accidents.

Safety Rules & Compliance Procedures

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Quality Checks

- ✓ Passenger announcements
- ✓ Door operation
- ✓ Knowledge of current procedures
- ✓ Console monitoring
- ✓ On time performance
- ✓ Train operations
- ✓ Uniform
- ✓ Wayside conditions

Additional efforts to address employee non-compliance with safety rules and procedures.



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Technology for Wayside Worker Protection

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Technology for Wayside Worker Protection

- FTA funding awarded for early alarm system technology.
- Early warning alarm technology is presently available.

Technology for Wayside Worker Protection

- Cab-mounted unit
 - System provides train operators with an audible and a visual alarm.
 - Alerts wayside workers wearing a personal warning device that a train is approaching.

Technology for Wayside Worker Protection

- Pilot projects tested on several transit properties
- Massachusetts Bay Transportation Authority and Maryland Transit Administration are installing system-wide



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